Title (en)

STARCH-BASED THERMOPLASTIC MIXTURE FOR PRODUCING BIODEGRADABLE SHAPED BODIES

Title (de)

THERMOPLASTISCHE MISCHUNG AUF BASIS VON STÄRKE ZUR HERSTELLUNG VON BIOLOGISCH ABBAUBAREN FORMKÖRPERN

Title (fr)

MELANGE THERMOPLASTIQUE A BASE D'AMIDON POUR LA FABRICATION DE CORPS MOULES BIODEGRADABLES

Publication

**EP 0994917 B1 20020612 (DE)**

Application

**EP 98933646 A 19980626**

Priority

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- EP 9803922 W 19980626

Abstract (en)

[origin: DE19729268A1] The invention relates to a biopolymer-based thermoplastic mixture for producing biodegradable shaped bodies with improved properties and to the production and use of said mixture. The inventive biopolymer-based, especially starch-based thermoplastic mixture is characterised in that it contains lignin, and is used for producing biodegradable shaped bodies with improved properties, preferably improved mechanical properties. The mixture is preferably obtained by providing and mixing together the following: A) 100 parts by weight of one or several physiologically suitable, biodegradable polymeric materials which can be processed thermoplastically from the group of polysaccharides and proteins; preferably of at least one starch of choice which is native, chemically modified, fermentative, recombinant and/or produced by biotransformation and/or of derivatives of said starches; B) 10 to 100 parts by weight of water; C) 1 to 100 parts by weight of lignin; D) optionally, up to 50 parts by weight of at least one plasticiser; and E) optionally, up to 200 parts by weight, preferably not more than 100 parts by weight of other usual additives. The constituents are thermoplasticised through the introduction of thermal and mechanical energy into the mixture, preferably at a high temperature with shearing forces being exerted on the mixture at the same time. The use of lignin with biopolymer-based, especially starch-based thermoplastic materials surprisingly produces improved thermoplastic materials which have advantages, especially in terms of their mechanical properties or other useful properties.

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